"BORN" EXPORTING IN THE MOULD CLUSTER OF MARINHA GRANDE

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Abstract

Empirical evidence on the start-up of two plastic moulds exporters located in Marinha Grande, Portugal, illustrates the process through which location within a cluster contribute to explain how start-ups manage to be "born" exporters.

Relations within a cluster tend to be frequent and long lasting, encouraging information flows and trust. These play an important role in detecting opportunities and in accessing resources. Furthermore, outward oriented clusters attract foreign buyers and facilitate unplanned contacts.

Introduction

The growing number of firms that are 'born global' has started to attract the attention of international business researchers (1, 2, 3, 4). When International New Ventures[1] (INVs) are located within clusters they are called 'interdependent INVs' (3). This due to the fact that Clusters are "geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries and associated institutions in particular fields, that compete but also cooperate."(5). Firms within clusters are interconnected to other firms and institutions; they are part of local networks.

Porter argued that clusters contribute to stimulating new business formation in a variety of different ways (5). However, the specific case of international new ventures has not received much attention in the theory of clusters (6) and empirical research is still scarce (5, 6, 7).

This paper aims to contribute to the empirical literature on international entrepreneurship within clusters. It adds to preliminary research on Exporting New Ventures located in the plastic moulds cluster of Marinha Grande, Portugal (8, 9). Main research questions are: how does the network of personal relations of an entrepreneur located within a cluster contribute to the different phases of the entrepreneurial process? How does the cluster contribute to early exports?

This paper is organized as follows. The first section covers the literature review. The methodological section where the research design is explained follows it. After a short introduction of the basic characteristics of plastic moulds cluster of Marinha Grande, the main findings are presented. To close, findings are discussed.

Literature Review

Porter argued that clusters contribute to stimulating new business formation. Entrepreneurs within clusters benefit not only from better information about opportunities but also from lower barriers to entry. Additionally, the presence of other successful entrepreneurs contributes to lowering the perceived risk of entry and stimulates other start-ups through imitation (5). Clusters influence business opportunities through a variety of forms. First of all, knowledge spillovers encourage spin-offs. Also, persons working and living in a limited geographic space tend to have frequent, unplanned face-to-face contacts that foster trust, supporting thick information flows. As a consequence, gaps in products, services or supplies are more likely to be identified. Furthermore, clusters constitute a significant local market for firms supplying specialized inputs or related goods and services. Finally, by including a significant number of successful firms in a particular field, clusters attract new entrants, both domestic and foreign (5). As far as resources are concerned, besides the supply side external economies underlined by Marshall (10), there are important demand side externalities (11). Location within a cluster increase the chances of being discovered by buyers, attracted to the cluster. Also the presence of a cluster of firms enhances the international reputation of a location and international buyers are more likely to turn to suppliers from that cluster. Moreover, firms can benefit from market information spillovers provided by institutions or through contacts with other cluster firms. Joint marketing activities are easy to pursue (11). Finally, the emergence of specialized institutions within clusters reduces the need for specialized investments (5).

[a] Defined as "a business organization that, from inception seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries" (2).

Recent theoretical developments in cluster theory remarked that entrepreneurs and firms located within clusters are 'embedded' in networks of personal and inter-firm relationships in which 'strong ties' and 'weak ties' coexist (12, 13 5). These concepts are borrowed from economic sociology and organizational theory. Research on entrepreneurship conducted within these disciplines has been arguing that the network of an entrepreneur plays a key role in the process of detecting opportunities, gathering resources and gaining legitimacy (13, 14 15 16 17). 'Weak' and 'strong ties' contribute in different ways to the various dimensions of the start up process. 'Weak' ties seem to be especially important in the discovery of opportunities and in the search for very specialized resources. 'Strong' ties are especially useful to guarantee the access to resources at competitive prices and to exchange tacit knowledge (17). The influence of other specific aspects of network structure – like size, density, and diversity- on entrepreneurial activity and success has been investigated (14, 16, 18, 19, 20). Increasingly, the simple causality between network characteristics and the start up process have been questioned. A contingency argument has been proposed; the network support needed varies across firms' goals, across sectors and across time (17).

Empirical research on spin-offs, typical of industrial clusters, has shown that during their previous working experience entrepreneurs have not only acquired technical know-how but have also established personal relations with suppliers, customers, other producers, specialized institutions, skilful employees and even potential partners. These former business connections contribute to the development of reputation, foster mutual understanding and trust, and enhance inter-firm co-operation (21, 22, 23).

Research on the process of entrepreneurship has put forward structural models of the initiation of a new venture, linking concepts from a variety of disciplines (psychology and behavior sciences plus organization theory). Yet these models tend to stop at the moment an opportunity is discovered and a decision to start up is taken. Little or nothing is said about the actual start up process: how resources are gathered and the first customers are found (24).

International business literature argues that the founders of INV have unique competencies that enable them to detect opportunities for operating in foreign markets (2). Networks, knowledge and background, namely international experience, are referred to as key competencies of these entrepreneurs. Other factors that might influence the process are largely neglected. As far as location in clusters it is simply suggested that this results in economies and internationalization for all participants (3).

This review of the literature has simultaneously contributed to the detection of research gaps and enabled the identification of key analytical dimensions of the entrepreneurship process. The hypothetical casual chain runs from location within clusters to the different phases of the start-up process, including the first exports. Nevertheless, the mechanisms through which the social structure of networks within regional clusters intervenes in the different phases of the start up process need to be further examined.

Research Design and Method

Our study is based on two case studies of exporting companies located in the plastic moulds cluster of Marinha Grande, Portugal. Case study methodology was chosen since it has been considered the adequate strategy for research when little is known about a phenomenon (25, 26).

The operational definition of Exporting New Ventures (ENV) used is based on Oviatt and McDougal (3) definition of INV. A firm qualifies as an ENV if it has a significant percentage of sales coming from foreign countries (export intensity) within the first six years of activity. The unit of analysis is the firm within the cluster while the unit of observation is the entrepreneur and its personal network of relations.

The cases were selected from the on-line directory of members of Cefamol, the National Moulds Industry Association. Several firms were contacted and asked whether one of the founding partners were still active and the average proportion of sales to foreign customers during the first six years of activity. Two that met the above mentioned criteria were chosen based on the availability of founding partners to participate in the case studies.

Data was collected through semi-structured interviews of founding partners, complemented by archival data. An interview protocol was prepared for the effect. Entrepreneurs were asked to make a detailed description of the start-up process, focusing the main reasons for start-up, the process of opportunity detection and the access to key resources and competencies. The first contacts with foreign customers were carefully explored. The case studies' database includes the interview report, along with additional information provided by the firms and archival data (25). A visual mapping strategy was chosen for within case analysis since this is appropriate for the study of process data. Next, the visual maps of

the two cases were compared, common sequence of events and sources of influence were looked for (27).

The mould cluster of Marinha Grande

The mould industry in Portugal has its origins in the glass industry. Marinha Grande, 93 miles north of Lisbon, was one of the two traditional glass-making centers in Portugal. It was there that the first moulds for glass were produced in the mid 1920s. In 1944, the first firm specialized in moulds for plastic materials, Aníbal H. Abrantes, was founded. Mould exports started in the mid 1950s and rapidly increased. The large foreign demand for moulds encouraged the foundation of other mould-makers though spin-offs from Aníbal H. Abrantes or from other mould-making firms. This way mould making firms tended to locate near each other and an industrial cluster emerged.

At present the Marinha Grande cluster consists of roughly 200 mould-making firms, employing nearly 4,000 persons and with a total volume of sales of 177 million Euros. These values mean that 62% of the moulds produced in Portugal were made in Marinha Grande. Portugal occupies the 11th place in ISTMA[2] ranking of producing countries (18 countries are included), immediately before Belgium, Netherlands, Finland and Sweden. Not all these firms are whole mould makers; some have specialized in the production of parts and others in the performance of specific operations. This explains the large number of very small firms; half of the firms have less than 10 employees. In addition, there are individual entrepreneurs that work in very small shops, providing specialized services. Several mould makers have founded or acquired other firms in order to increase production capacity without having more than 50 workers per plant; this is considered the efficient limit as far as mould-making firms are concerned. The result is a number of decisions centers much smaller than the total number of firms. Only 4 firms are foreign owned.

The co-location of so many different types of firms in Marinha Grande favored the outsourcing of parts, components, specific activities or even whole moulds. Portugal has a relatively high value of subcontracting work as a % of turnover -15% - one of the highest among ISTMA members.

The very high investment rate (16,6% of sales in 1999) is another key feature of the Portuguese mould industry. The results are at sight: mould-making firms are virtual show rooms of up to date equipments. Plus, the significance attributed to technology is present in everyday talks of mould entrepreneurs and employees. As a result, social informal relations between firms are strengthened. Investments in technology and equipment are accompanied by continuous investments in training, since a skilled work force is a critical resource in this business.

As far as suppliers are concerned most equipment, steel and standardized components are imported. A significant number of foreign suppliers have local representatives or even offices in Marinha Grande. A diversity of other inputs and services (mould design, programming) are sourced locally.

Unlike what is typical of clusters, the main customers of moulds produced in Marinha Grande are foreign. 90% of mould production is systematically exported. In the year 2000 Portugal was the 9th most important exporter in the ISTMA ranking, in front of countries like Spain and the UK, bigger producers than Portugal. During the period 1994-99 moulds for plastic injection were exported to 105 different countries. USA, Brazil and Israel are the only non-EU Member States included in the ten more important destinations. Others are by order of importance: France, Germany, UK, Sweden, Netherlands, Spain, Belgium-Luxemburg. Portuguese moulds are sold to a wide range of industries. Today the most important and dynamic customer industries are the automotive, packaging, electronic and telecommunications. Households and toys continue to lose weight.

Between 1994 and 1999, mould makers were responsible for nearly of 80% of exports while engineering and trading firms accounted for 20%. As a consequence trading companies are the most important local customers for mould makers. There are 51 trading firms in the area of Marinha Grande. Most are very small, employing less than 10 persons while a few employ between 10 and 49 persons. Five of these larger firms are part of business groups. Both mould making and trading companies have been investing downstream (in plastic injection) and upstream (product development) throughout the 90s in order to strengthen relationships with customers. The internationalization of production has also started, being mainly directed to Brazil and Mexico.

Besides Cefamol, founded in 1969, two other specialized institutions locate in the cluster. Centimfe, an advanced technological center for the metal and mould making industries established in the early 1990s and Cenfim, the Professional Training Center for Metallurgic and Mechanical Industries.

Case studies

Firm A was founded in 1988 by 11 partners; 10 were former workers of the same mould maker, the

[b] ISTMA - International Special Tooling and Mould Association.

other was also working in a mould maker and was the brother in law of one of the ten.

The founding partners could not tell exactly when the idea to create a mould making firm first appeared in their minds. They think that the fact they could observe there was a big demand for moulds and that several other workers had already began their own firms were key factors in this process.

At first the discussion of the possibility of creating a firm only happened among 2 or 3 partners but progressively it was extended to the others. This was due to the need they had of gathering all the necessary technical capabilities involved in the mould-making process. The partners had complementary competences and among them could produce a whole mould. As a consequence, the human resource problem was initially solved. The next step involved getting the financial resources needed to buy the equipment and also finding a place to start activity. Personal savings were not enough to buy all the machines needed to produce a whole mould and banks do not usually lend money without guarantees. The solution was to rent a place and also the machines within it. It was possible to find such a solution because of one of the partners knew the owner of the building and machines because they lived in the same area. Some other machines were needed but once more it was difficult to find a bank willing to lend money without guarantees. It was only the fact a manager of a local bank agency knew well some of the partners that contributed to guarantee a partial loan. The rest of the money was obtained from a private acquaintance of one of the partners.

To start working there was only the need to find customers. Although at that point there was a big demand crisis, it was easy to find work. At first, only parts of moulds that were bought by local whole mould makers but very soon local mould traders started to place orders from foreign customers. As a result the firm started to export indirectly, that is through local mould traders. Two years after foundation direct exports began to a Spanish customer that came to the firm because he was visiting the cluster, drove by the firms and decided to stop and examine the work that was being done. This customer became a very important one. Other foreign customers came to the firm because they observed moulds made by the firm being tested in local specialized firms and liked what they could see. And a few years later, in 1992, this firm joins another local mould maker in visits to potential customers.

Eight partners founded Firm B in 1987; six were fellow workers in a local mould-making company and the two other were the partners of that same company. The six partners knew each other before having worked together since they went to the same school and live in the same area.

The idea to start a venture emerged from talks during and after work. By working together they could observe each other abilities to perform certain tasks. Also, they realize that among them they were able to produce a whole mould.

When they decided to start the new venture, their bosses offered to participate in the society. The partners agreed since they recognize it would be an important asset in contacts with the banks, equipment suppliers and customers. In fact, the firm was able to start activity with all the equipment needed to produce a whole mould and at the same time they had customers and money. At first the only workers were the partners.

The first customer was exactly the firm were they had worked before. The final customer, however, was an American producer of electric equipment. Soon, after the firm has started to export directly to customers in Canada, USA, France and Sweden. Some customers came through referrals from others; some came through contacts established in trade fairs, followed by visits to the customers.

Discussion

Entrepreneurs located within this cluster benefited from dense networks of local relations. In local networks ties tend to be strong but there are a number of weaker ties to economic agents external to the cluster. Mould exporters are major contributors to weak ties with foreign customers. In addition the cluster reputation attracts foreign buyers that visit the cluster and establish a large number of weak relations with different types of local firms.

The personal network of relations of the entrepreneurs was a key asset in every phases of the entrepreneurial process. The same relationship could intervene at different times as different types of relationships could contribute to the same phase. As far as the idea to star-up is concerned, the information available within the cluster imply that demand expansion was readily noticed by workers as were start up initiatives from peers. But location within a cluster was especially helpful to access the resources necessary for start up. ‘Strong’ ties were used to find venture partners, who were simultaneously venture workers. The previous working experience of partner in the same firm enabled each other to know each other professional capabilities along with other social characteristics. This way each partner could trust the ability of other partners. Both strong and weak ties were important in guaranteeing the financial resources essential to buy or rent equipment. Finally, as far as

customers are concerned, 'strong' ties were especially important to get the first local customers while weak ties and location within a clusters seemed especially important when first direct exports were concerned.

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